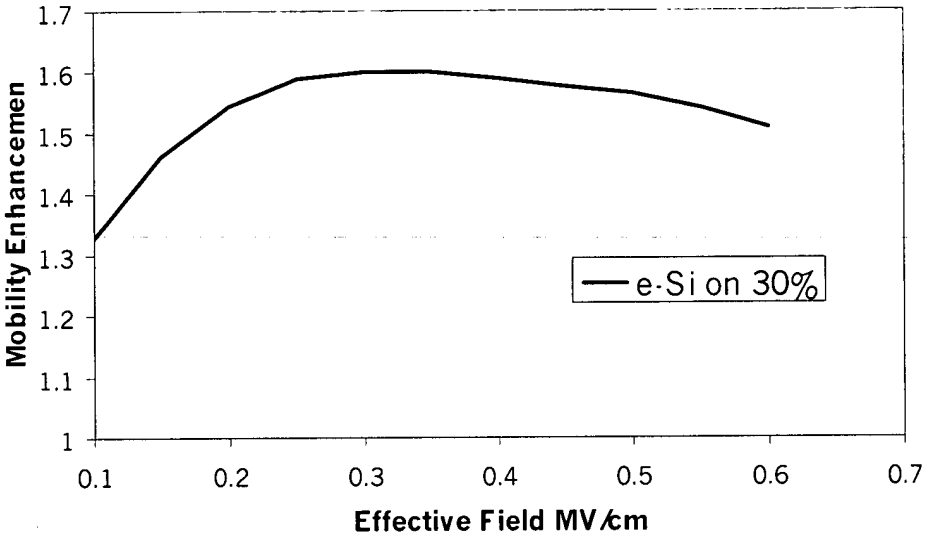

FIG. 1

Prior Art

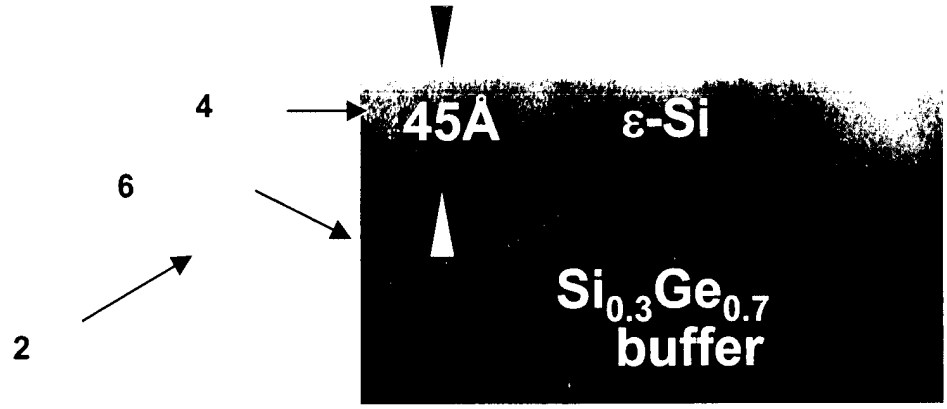
4
45Å
ε-Si
6
2
$Si_{0.3}Ge_{0.7}$
buffer

FIG. 2A

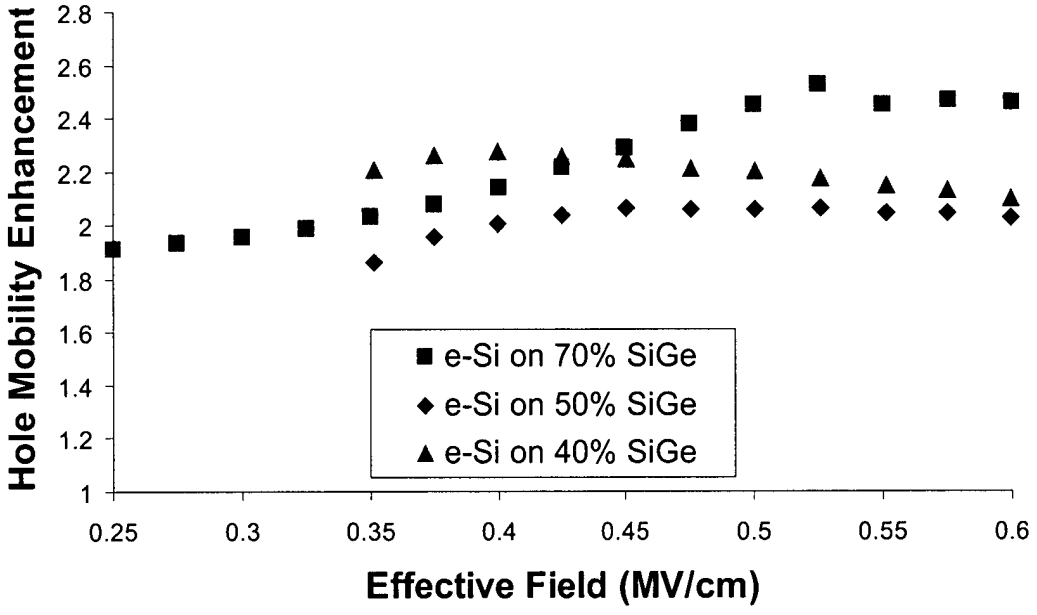
Hole Mobility Enhancement
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.25
0.3
0.35
0.4
0.45
0.5
0.55
0.6
Effective Field (MV/cm)
e-Si on 70% SiGe
e-Si on 50% SiGe
e-Si on 40% SiGe

FIG. 2B

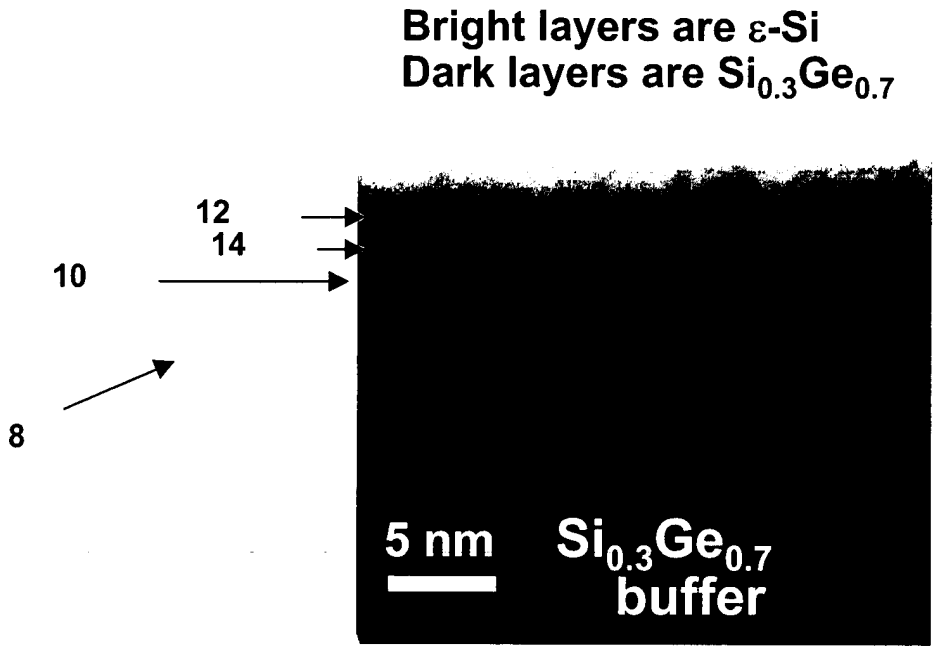

FIG. 3A

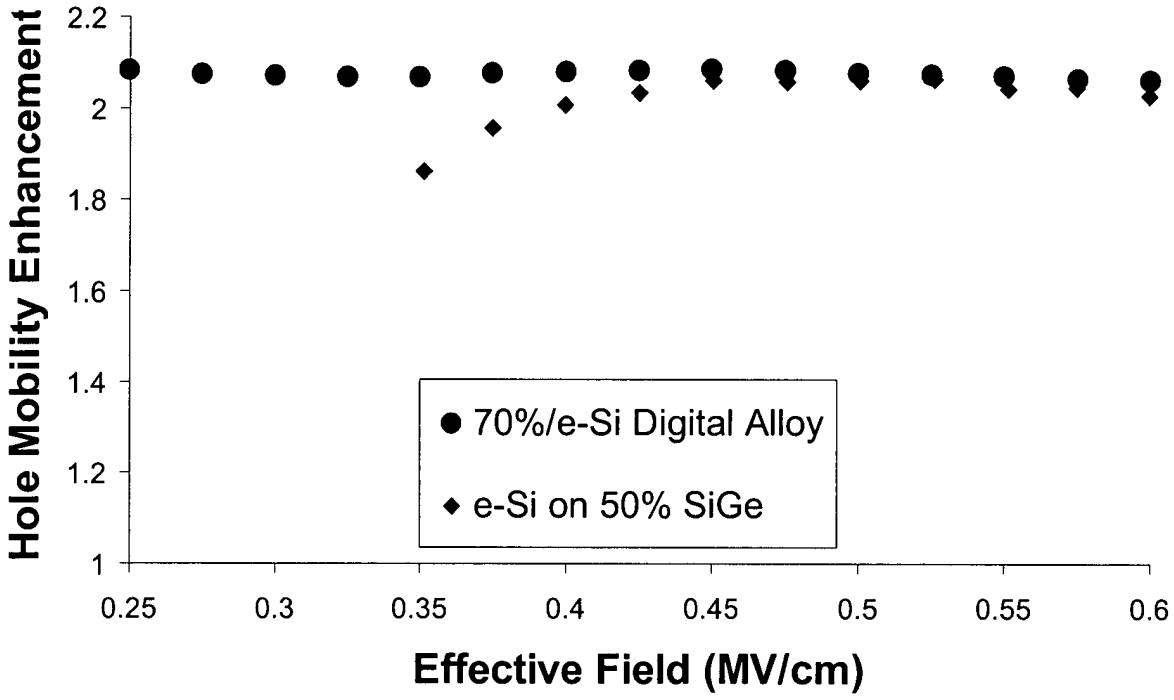

Figure 3b- Mobility enhancement of ε-Si/$Si_{0.3}Ge_{0.7}$digital alloy pMOSFET compared to conventional ε-Si device